

TABLE 2.—Results of Laminectomy in Compensable and in Privately Treated Patients Who Were Not Adequately Benefitted by Conservative Treatment

	Number of Cases	Excellent	Good	Fair	Poor
Private patients	17	4	6	7	0
Industrial patients ..	39	7	11	13	8
Total	56	11	17	20	8

The manipulative treatment was arbitrarily restricted to two attempts in each case and operation was immediately recommended to those patients who did not have satisfactory results. Laminectomy was done in 56 cases (27 per cent of the series). Thirty-nine of the patients were subject to industrial compensation and 17 were privately treated. Spinal fusion was an additional procedure in seven compensable patients and in one private patient. The results are shown in Table 2. As in Dr. Werden's report, the results were much poorer in industrial than in private cases. Reducing the comparable data in the two series to percentage, we note that 18 per cent of the surgically treated patients in our series recovered without measurable permanent disability, as against 42 per cent in Dr. Werden's series.

On the other hand, in the 94 industrial cases in the present series in which conservative therapy, including manipulation, was successful, 77 per cent of patients recovered without measurable permanent disability. For the entire series of 133 cases, including those surgically and those conservatively treated, 59.4 per cent of patients recovered without measurable permanent disability. In the 60 cases finally adjudicated in the Werden series, 21 were closed without award—35 per cent.

In the cases that were ratable, the average dollar cost per case in permanent disability awards was \$6,073 in the Werden series and in ours \$4,728. The average cost in permanent disability awards for patients treated by manipulation (present series) was \$2,156.

Our observations are in complete agreement with Dr. Werden's, relative to the pronounced disparity in results between industrial and private patients and between the clinical results and the assumed permanent disability on industrial ratings. His comments as to causes are subscribed to by ourselves.

On the basis of comparison of results reported by Werden and those in the present series, it would seem indicated that for patients with herniated intervertebral disc, conservative treatment, including manipulation, be tried first. Failure of conservative treatment in no way interferes with operation later if necessary. The only loss is time and the cost of a few additional days of hospitalization.

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Treatment of Protruded Disc By Laminectomy Only

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AS PREFACE to my discussion of Dr. Werden's paper, it may be well to recognize that I do so from the standpoint of "Treatment of Protruded Disc by Laminectomy Only." It is probable the assignment was given to me because of my known belief that the simple disc operation is satisfactory in the majority of cases. Furthermore, I believe there is no indication for the combined operation—the removal of the disc by a neurosurgeon and then fusion by an orthopedist—and I believe that the surgeon should be able to diagnose and administer treatment, whether it be operative or nonoperative and whether he be a neurosurgeon or an orthopedic surgeon.

Although I think we are all a little afraid of statistics, we will have to congratulate Dr. Werden on the clinical results obtained in compensation cases. As to the wide difference between the clinical results and the results as judged from the standpoint of compensation awarded to the patients, I do not believe that these differences should surprise us too much if properly analyzed. A surgeon, in evaluating results in patients he has treated has a biased opinion. He wants the patient to get well. It is also deflating to his ego if the results are poor. Therefore, it is his natural tendency to over-evaluate and to classify his results as better than another surgeon would or better than the patient himself would. On the other hand, the cash settlement paid out by the insurer is probably often higher than is justified. This is because a patient may magnify, either consciously or subconsciously, the severity of symptoms.

Dr. Werden said that of 76 patients, 38 had the easy operation, and 38 had the hard operation. Of the 38 who had the easy operation, only 17 received money. Of the 38 who had the hard operation, 27 received money. The average amount received by those who had the easy operation was \$2,758. For 24 of the 27 who had the hard operation the average settlement was \$3,463. The three others received \$12,000 each. I would like to know on what basis the candidates were chosen for the combined operation and what were the complications that contributed to this degree of disability. Could some of these patients have had displacement of bone chips? How often did pseudarthrosis of the fusion occur? Were there any unrecognized cases of interbody infections? Were there any cases of arachnoiditis?

Presented before a Joint Meeting of the Sections on Industrial Medicine and Surgery, and Orthopedics at the 85th Annual Session of the California Medical Association, Los Angeles, April 29 to May 2, 1956.

Dr. Werden said that "In disc lesions, the more lateral the herniation, the more diagnosis is a neurological problem, and the more midline the herniation or protrusion, the more the operative exposure and removal is a neurosurgical problem, and "In either instance, only spinal stability is an orthopedic problem." On that point, I can only say that the more lateral the lesion, the more definite the neurological findings—so much so that even a second year medical student should be able to diagnose the case. The operation is very simple, and the results are usually quite good. The more midline the lesion, the more obscure the neurological findings and the more the physical findings are confined to the back. In many cases, so localized are the findings that the neurosurgeon believes that it must be an orthopedic problem having something to do with instability. Why should we call one phase of the condition a neurosurgical problem and another phase of the condition an orthopedic problem? I believe the time has come that our teaching should be that the surgeon, whether he be an orthopedic surgeon or a neurosurgeon, should be able to diagnose herniation of a disc and administer treatment whether operative or nonoperative. I believe the neurosurgeon should be criticized from the standpoint that too often he will undertake operative treatment of disc disease but cannot be bothered with nonoperative treatment. Also, if the patient has residual back pain after operation, the case becomes an orthopedic problem. The orthopedic surgeon, on the other hand, should be criticized if he has failed to recognize certain physical findings which indicate intervertebral disc disease or if he has not correlated these physical findings with pathological changes that are evident on exploration of the neural canal. There are still too many orthopedists who will make a diagnosis of unstable lumbosacral joint when the true condition is a degenerative change in the disc. To illustrate, I quote from the reports of a prominent orthopedic surgeon and a prominent neurosurgeon who examined the same patient, who was subject to industrial compensation.

Orthopedic opinion: "She has evidence of an unstable lumbosacral joint as manifested by a narrowing of the fifth interspace. At the present time, I believe that she is disabled from work requiring lifting. She could, however, carry out work which did not require lifting and bending and stooping. I feel that she should be fitted with a back brace and that this back brace should be used for a period of four or five months, concurrently with which the patient should carry on exercises to strengthen the musculature of the back. It is probable that on this program she will recover without disability."

Neurosurgeon's opinion: "It is my opinion that

this patient probably has a degeneration of her lumbosacral intervertebral disc which makes it vulnerable to recurrent protrusions through a thinned-out annular ligament. It is recommended that she be referred to an orthopedist and that he consider the use of some type of low back support. We do not believe that we have much to offer her inasmuch as there are no surgical measures indicated at this time."

It is unfair to the patient that he be subjected to this vacillation and indecision, because neither the neurosurgeon nor the orthopedist is capable of diagnosing and treating all phases of disc disease. The shunting of the patient back and forth leads to poor doctor-patient relationship and loss of confidence, and in the end probably has a great deal of effect on the amount of money awarded for partial permanent disability.

In conclusion, I want to challenge the author's statement, "In disc lesions only spinal stability is an orthopedic problem." I also want to challenge those orthopedists who will support or acquiesce to such an opinion. Either surgeon should treat all phases and stages of disc disease. How specialized a surgeon must have become, that he will only perform half of an operation!

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Laminectomy and Fusion For Disc Lesions

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AS MATERIAL for a discussion of treatment of intervertebral disc lesions by laminectomy and by fusion, records of 50 patients not previously operated upon, who were treated by one surgical team (the authors) in the years 1950-1955, were reviewed. No attempt was made to select the cases. Also reviewed were eight cases of patients who were dealt with after they had been treated elsewhere without satisfactory result.

Ten of the 50 cases in the first group were industrial and 40 were nonindustrial. (The nonindustrial cases included two in which the patients sought care after the termination of their industrial status.) No new methods were used. Laminectomy was done with the patient prone or lying on his side. Spine fusion was accomplished either by fitting "bone blocks" between the spines of the lumbar vertebrae and also

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Presented before a Joint Meeting of the Sections on Industrial Medicine and Surgery, and Orthopedics at the 85th Annual Session of the California Medical Association, Los Angeles, April 29 to May 2, 1956.